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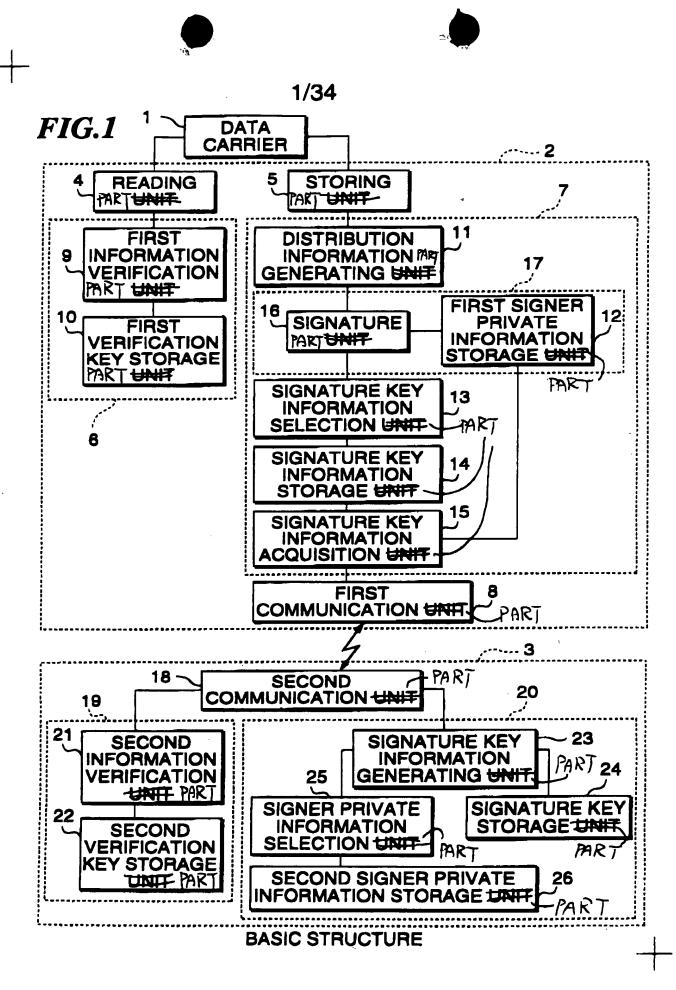
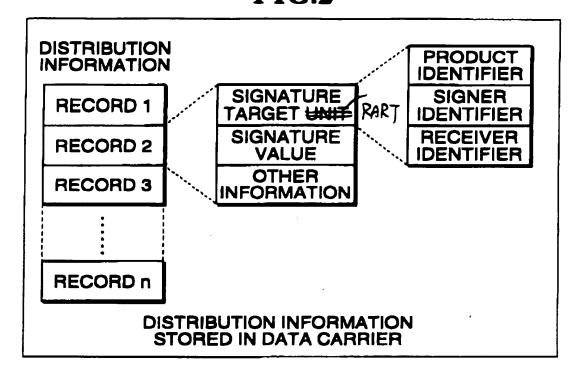
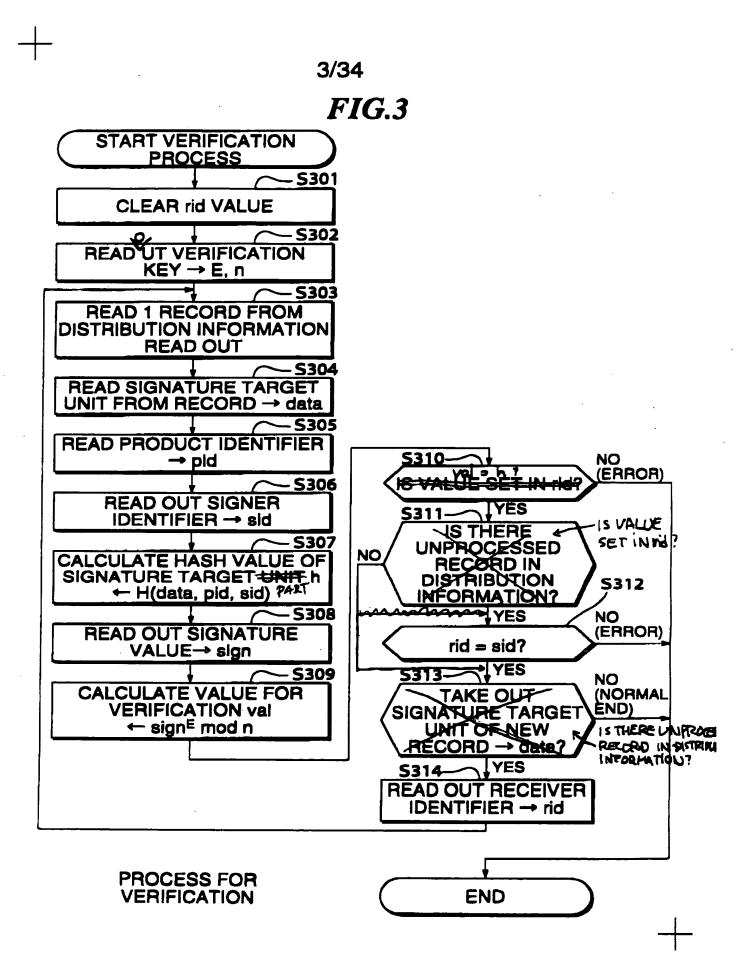
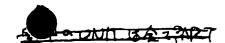


FIG.2







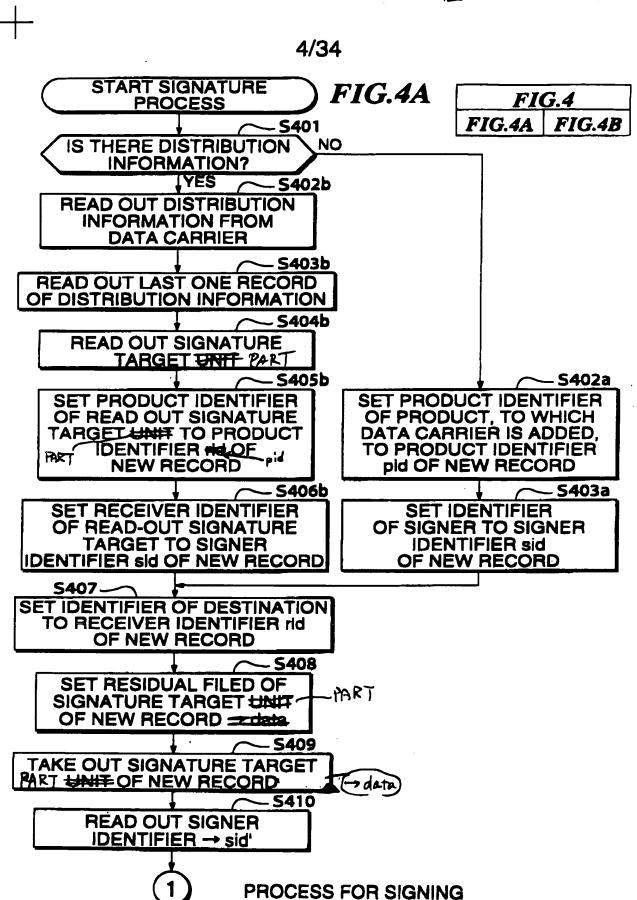
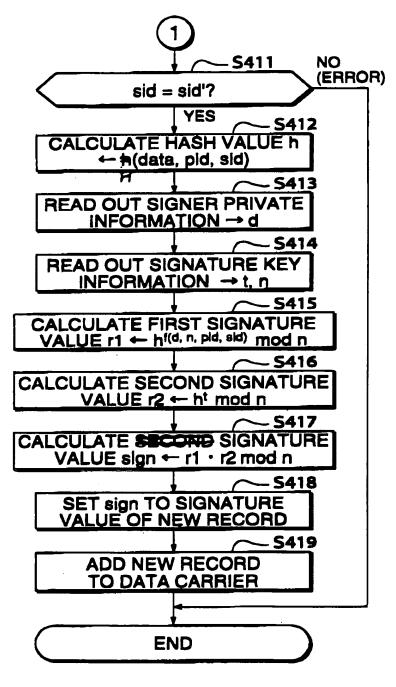
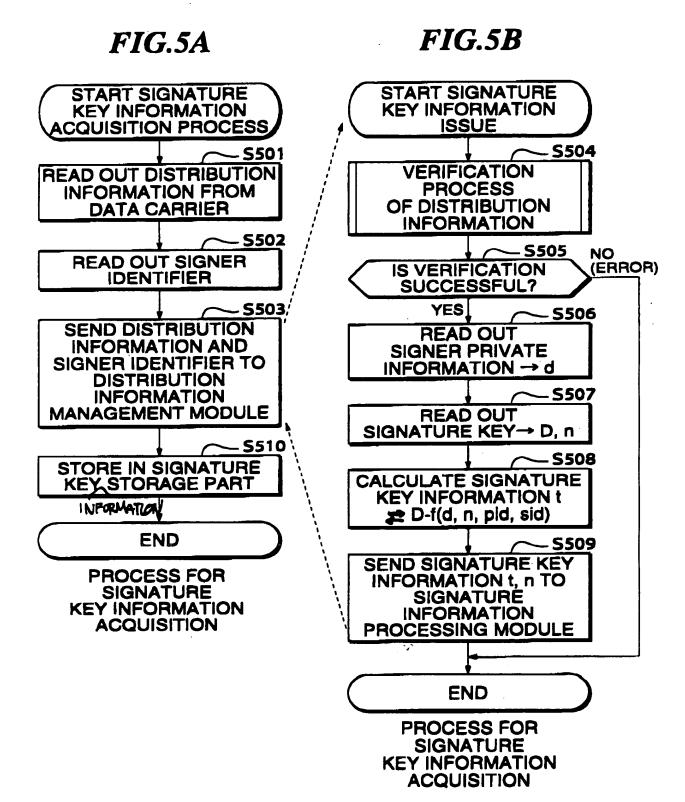


FIG.4B



PROCESS FOR SIGNING



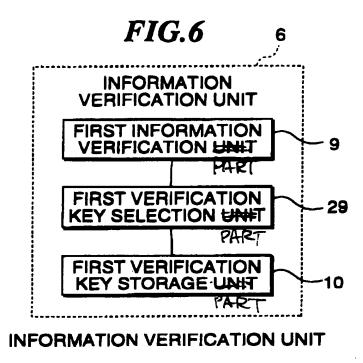


FIG.7

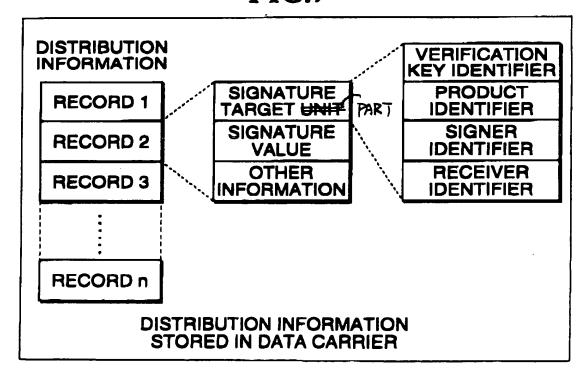


FIG.8

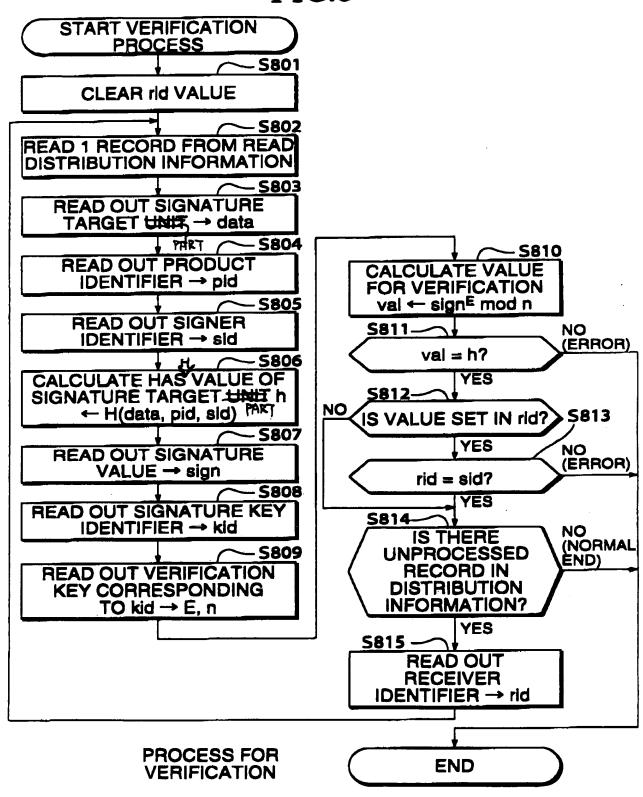
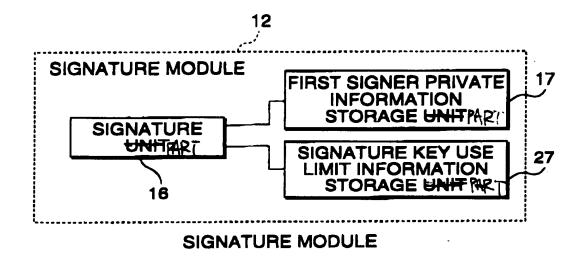
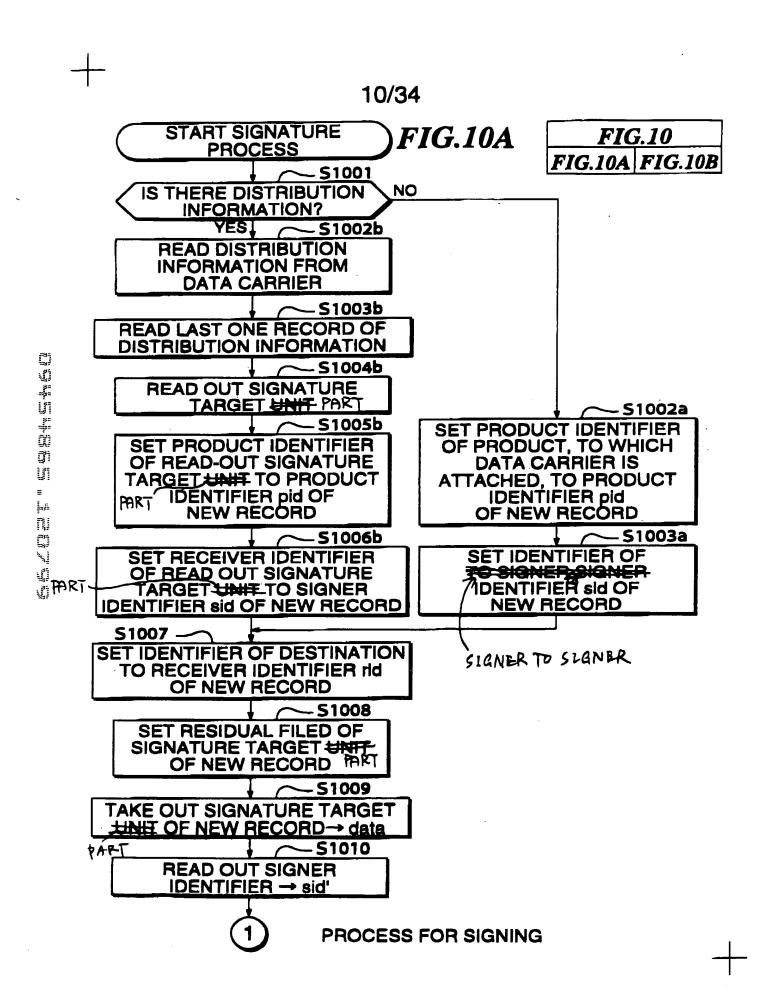
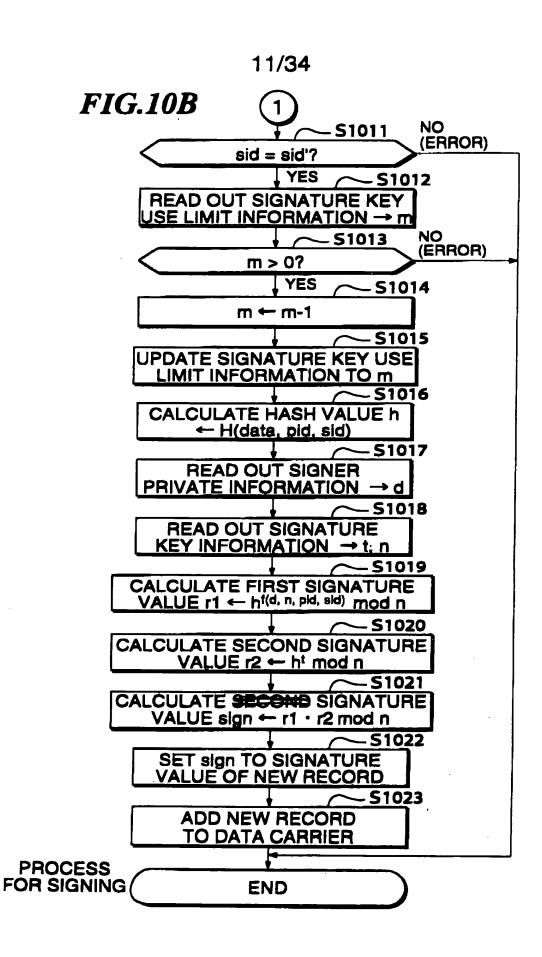


FIG.9





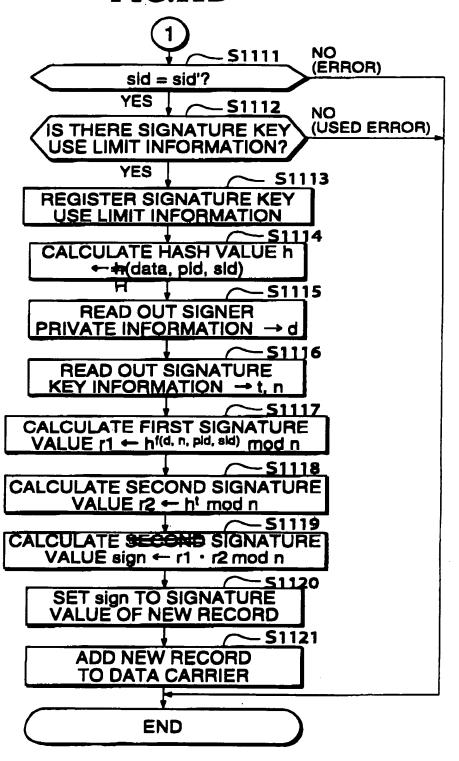


12/34 START SIGNATURE FIG.11A FIG.11 **PROCESS** FIG.11A FIG.11B 51101 NO IS THERE DISTRIBUTION INFORMATION? YES. S1102b READ DISTRIBUTION INFORMATION FROM **DATA CARRIER** S1103b READ LAST ONE RECORD OF DISTRIBUTION INFORMATION S1104b READ OUT SIGNATURE TARGET WHIT PART S1102a S1105b SET PRODUCT IDENTIFIER SET PRODUCT IDENTIFIER OF PRODUCT. TO WHICH OF READ-OUT SIGNATURE DATA CARRIER IS ATTACHED, TO PRODUCT IDENTIFIER pld TARGETUNH TO PRODUCT IDENTIFIER pid OF PART **NEW RECORD** OF NEW RECORD \$1106b S1103a SET RECEIVER IDENTIFIER SET IDENTIFIER OF OF READ OUT SIGNATURE **OSIGNER SIGNER** TARGET UNIT TO SIGNER IDENTIFIER sid OF IDENTIFIER sid/OF NEW RECORD **NEW RECORD** S1107 SET IDENTIFIER OF DESTINATION SLGNBR-TO SIGNBR TO RECEIVER IDENTIFIER OF NEW RECORD **S1108** SET RESIDUAL FILED OF SIGNATURE TARGET UNIT OF NEW RECORD PART S1109 TAKE OUT SIGNATURE TARGET **UNIT OF NEW RECORD→ data** S1110 READ OUT SIGNER IDENTIFIER → sid'

PROCESS FOR SIGNING

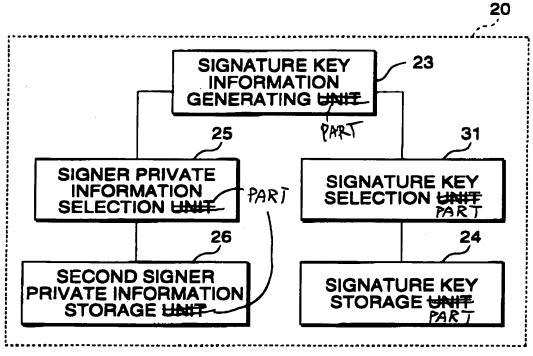
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13/34 *FIG.11B*



PROCESS FOR SIGNING

FIG.12



SIGNATURE KEY INFORMATION GENERATING MODULE

FIG.13A

FIG.13B

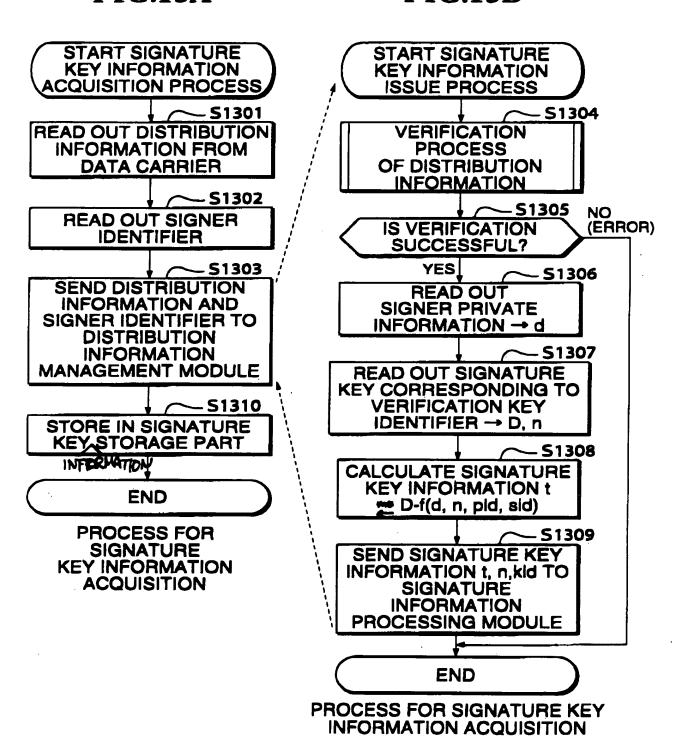
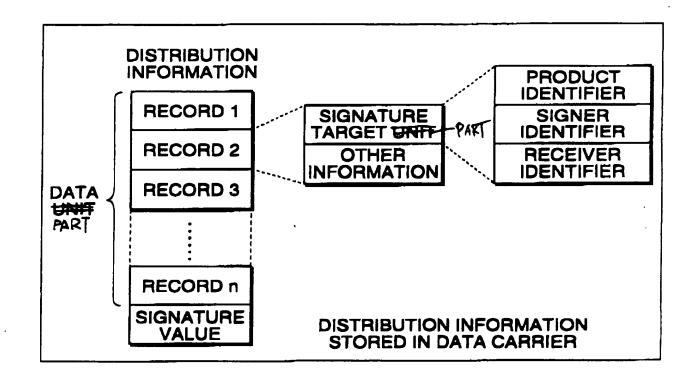


FIG.14



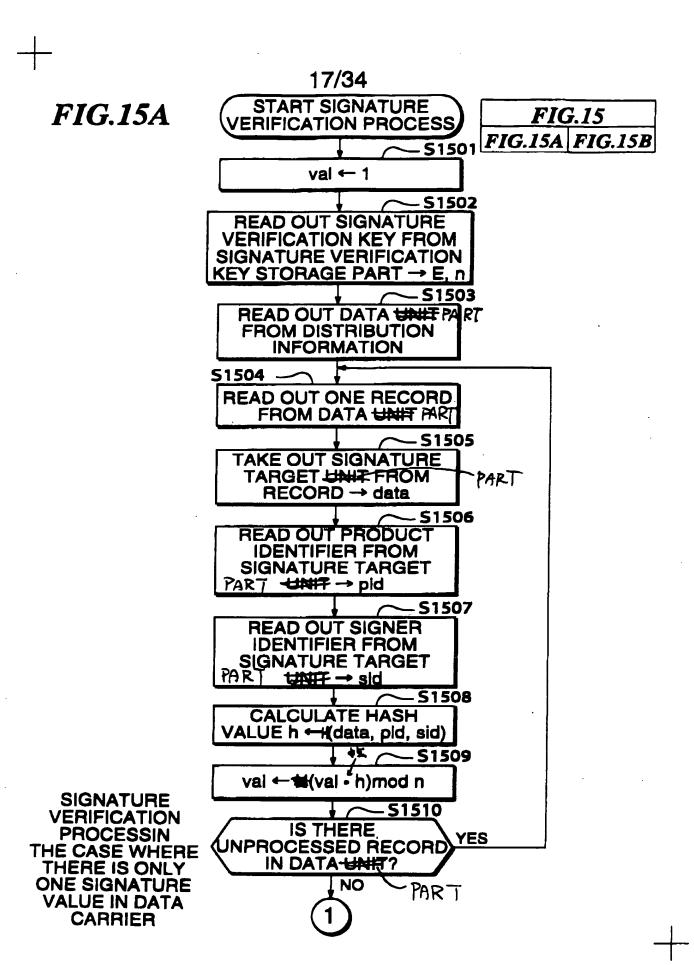
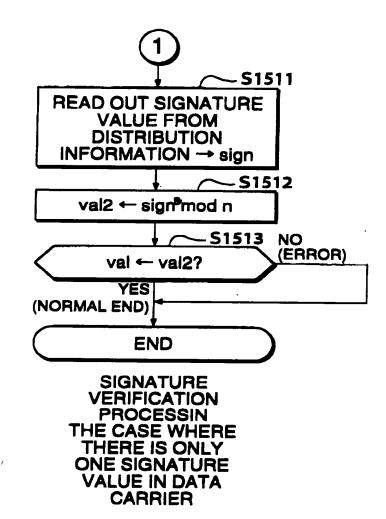


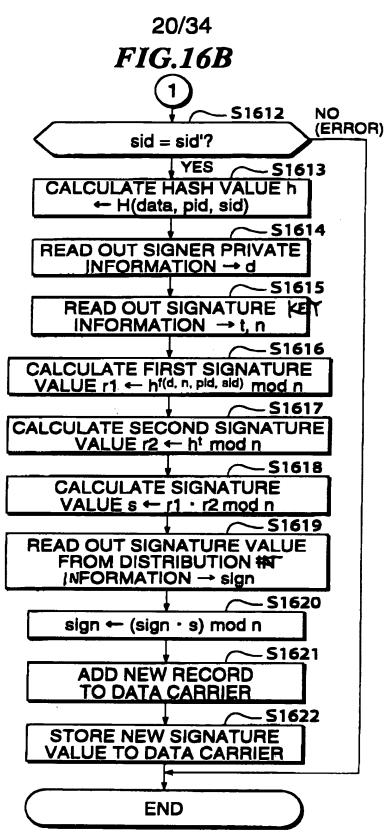
FIG.15B



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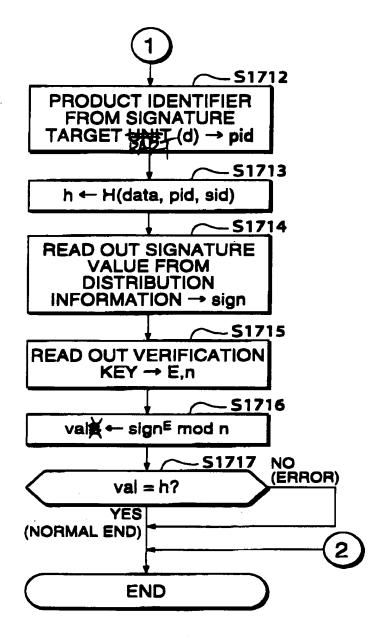


SIGNATURE PROCESS IN THE CASE WHERE THERE IS ONLY ONE SIGNATURE VALUE IN DATA CARRIER

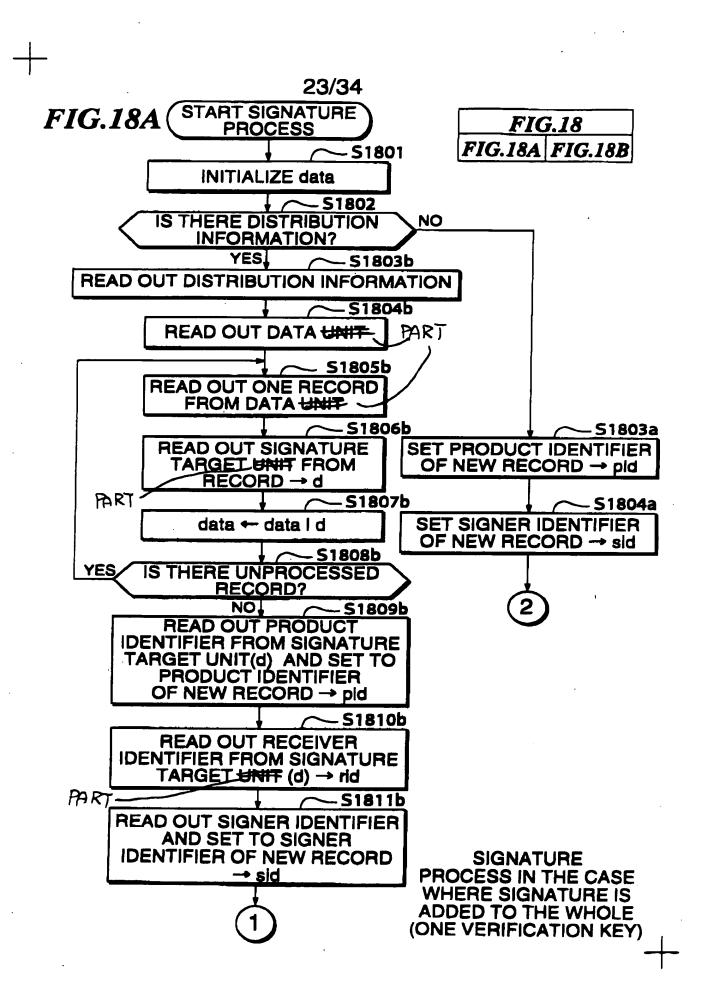
21/34 SIGNATURE **FIG.17** FIG.17A VERIFICATION PROCESS FIG.17A FIG.17B **S1701** READ OUT DISTRIBUTION INFORMATION FROM DATA CARRIER S1702 READ OUT DATA UNIT. PART FROM DISTRIBUTION INFORMATION - S1703 CLEAR rid, data 51704 **READ OUT 1 RECORD** FROM DATA UNIT ART **S1705** READ OUT SIGNATURE PART TARGETUNIT. → d **S1706 READ OUT SIGNER** IDENTIFIER → sld **S1707** YES IS VALUE SET IN rid? S1708 NO YES rid = sid?NO - S1709 (ERROR) data ← data | d - S1710 IS THERE NO UNPROCESSED RECORD? YES **S1711** READ OUT RECEIVER IDENTIFIER →rid

VERIFICATION PROCESS IN THE CASE WHERE SIGNATURE IS ADDED TO THE WHOLE (ONE VERIFICATION KEY)

FIG.17B



VERIFICATION PROCESS IN THE CASE WHERE SIGNATURE IS ADDED TO THE WHOLE (ONE VERIFICATION KEY)



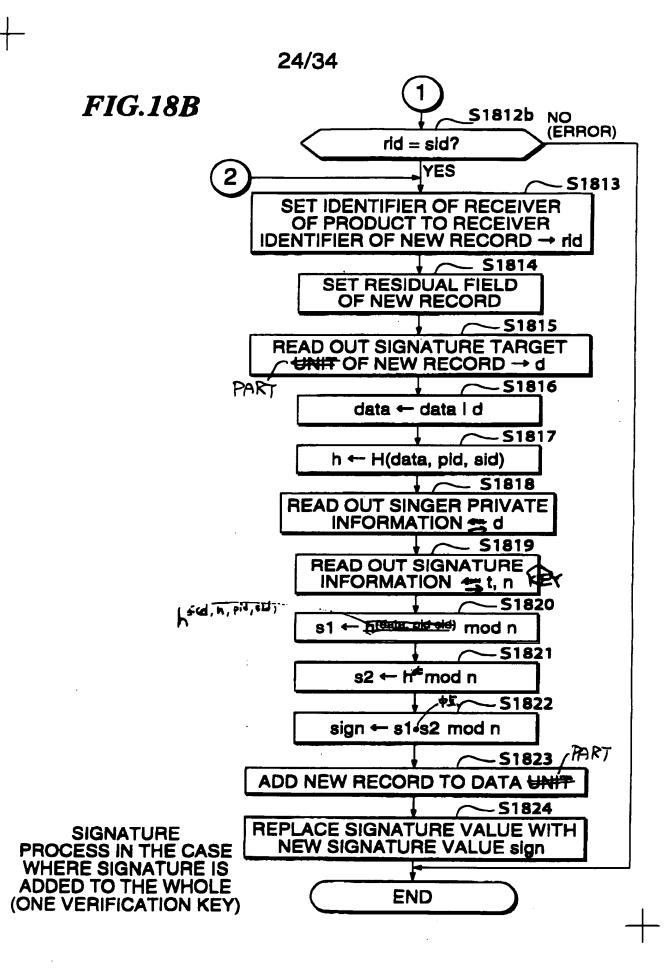
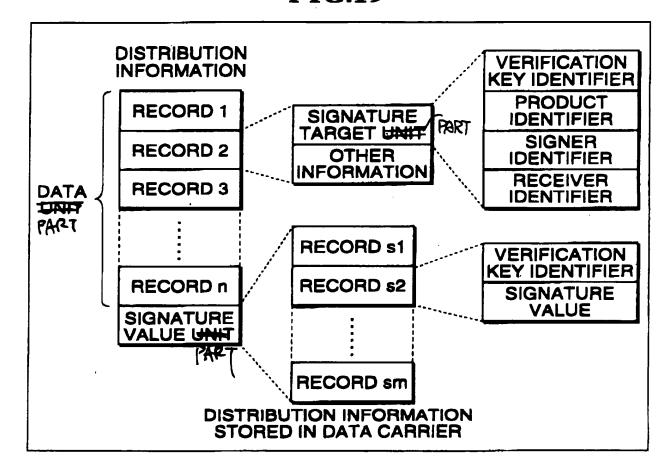
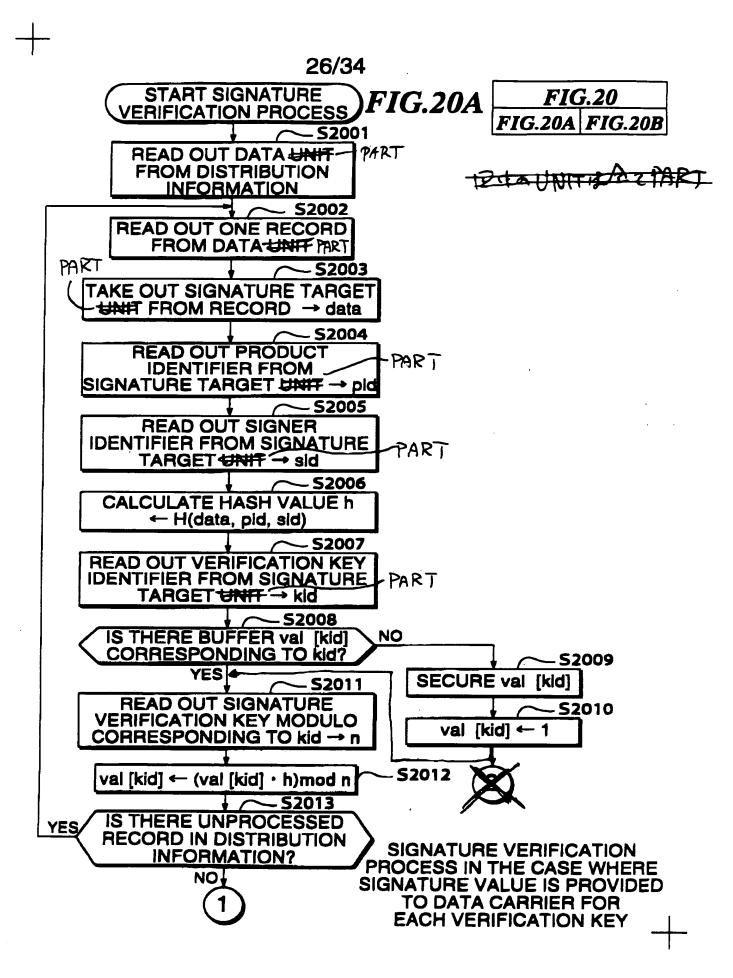


FIG.19



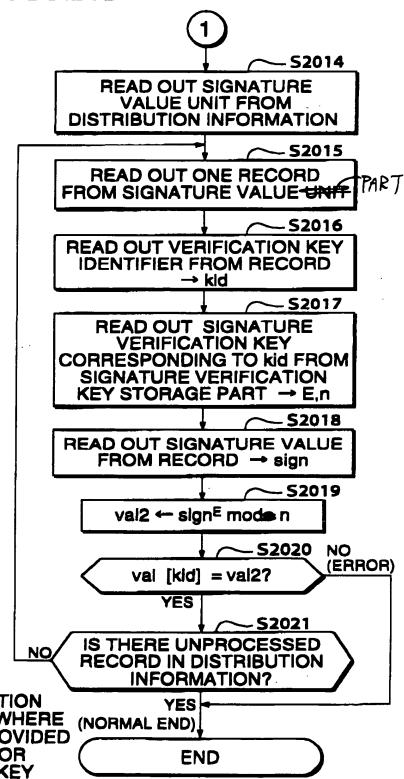


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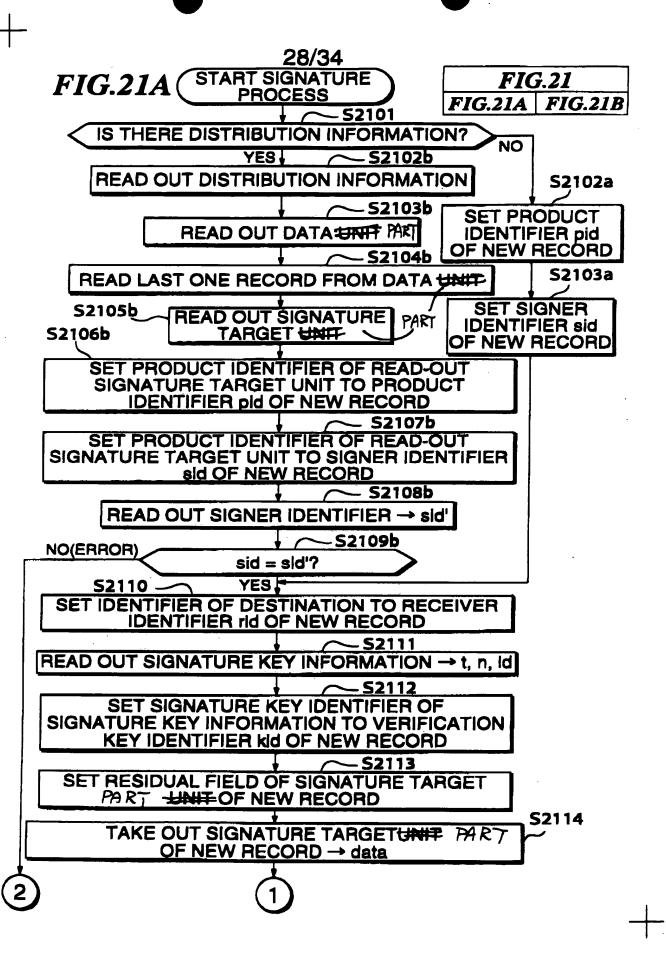
FIG.20B



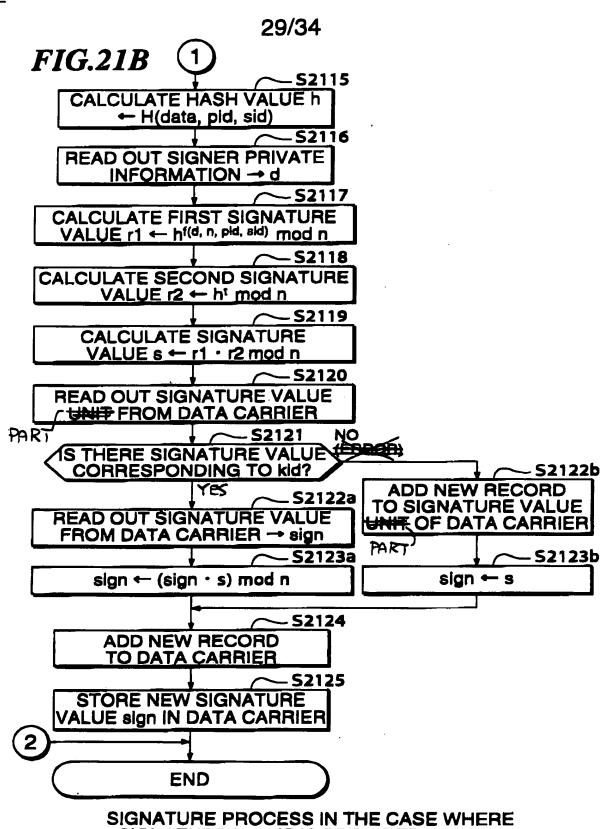
SIGNATURE VERIFICATION PROCESS IN THE CASE WHERE SIGNATURE VALUE IS PROVIDED TO DATA CARRIER FOR EACH VERIFICATION KEY

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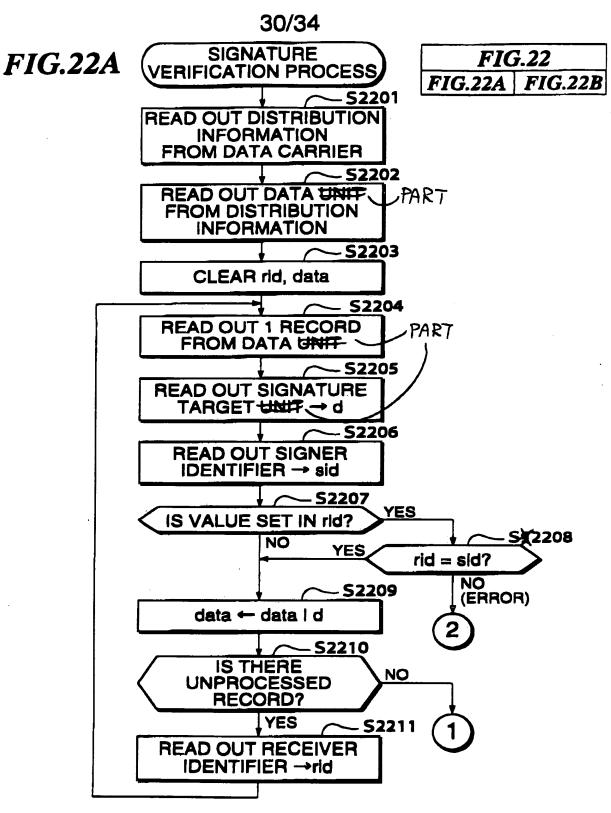
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SIGNATURE PROCESS IN THE CASE WHERE SIGNATURE VALUE IS PROVIDED IN DATA CARRIER FOR EACH VERIFICATION KEY ,,,。。。。。。 『 44 ,こい芸古の方が,オニハンで上海



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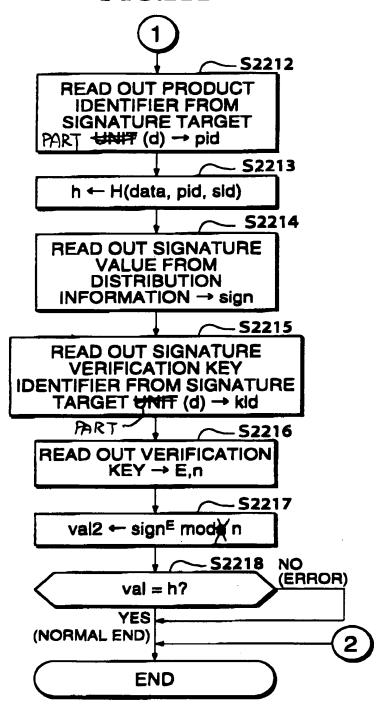
VERIFICATION PROCESS IN THE CASE
WHERE SIGNATURE IS ADDED TO THE WHOLE
(A PLURALITY OF VERIFICATION KEYS)

PLURAL

FIG.22B

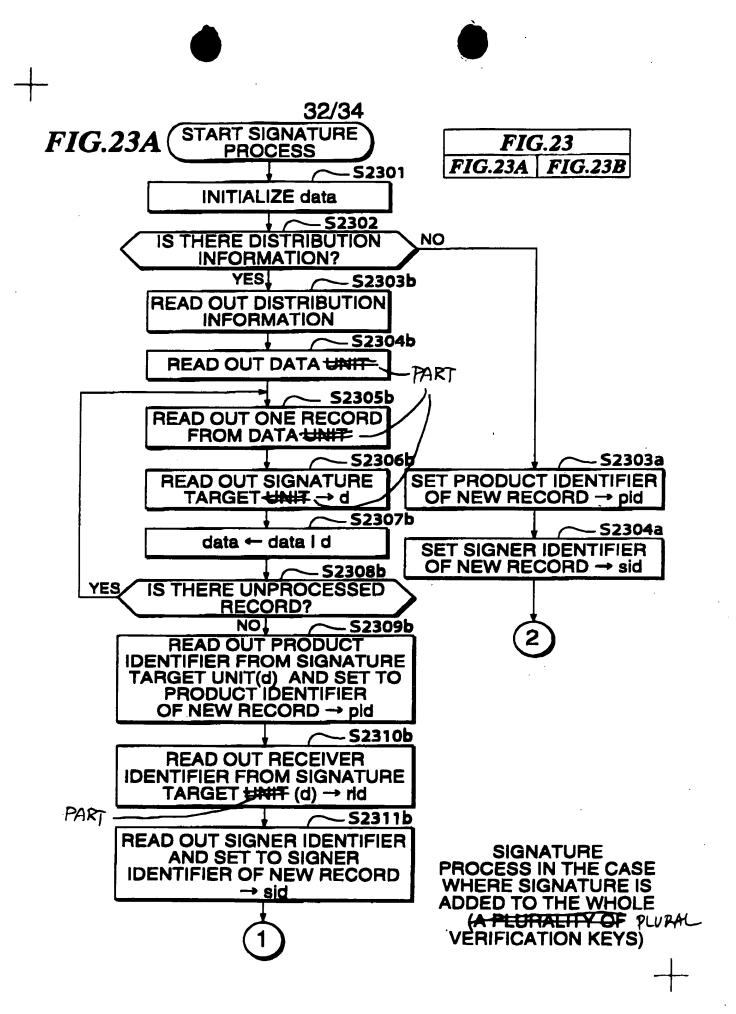
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VERIFICATION PROCESS IN THE CASE
WHERE SIGNATURE IS ADDED TO THE WHOLE
(A-PLURALITY OF VERIFICATION KEYS)

PLUBAL



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